



connected to the VCO for dividing a frequency of the DPLL signal.

- [c6] 6.The control circuit of claim 1 wherein the controller further sets charge pump currents of the frequency detector and the phase detector according to the target frequency.
- [c7] 7.The control circuit of claim 1 wherein the controller determines the target frequency referencing a track number and a media type.
- [c8] 8.The control circuit of claim 1 wherein the controller further sets an RF equalizer signal and a differential phase detector (DPD) equalizer signal according to the target frequency.
- [c9] 9.The control circuit of claim 8 wherein the controller references tabulated data to correspond the target frequency with the second control signal, the RF equalizer signal, and the DPD equalizer signal.
- [c10] 10.The control circuit of claim 1 wherein the optical disk drive operates in a constant angular velocity mode.
- [c11] 11.The control circuit of claim 1 being incorporated in a compact disk (CD) drive or a digital versatile disk (DVD) drive.
- [c12] 12.A method for controlling an optical disk drive, the method comprising:  
monitoring a data phase-locked loop (DPLL) signal;  
generating a first control signal based on an eight-to-fourteen modulation (EFM) signal and the DPLL signal;  
generating the DPLL signal based on the first control signal when the optical disk drive is in a non-seek mode;  
calculating a target frequency for the DPLL signal;  
generating a second control signal based on the target frequency; and  
generating the DPLL signal based on the second control signal when the optical disk drive is in a seek mode.
- [c13] 13.The method of claim 12 further comprising:  
detecting when a rotation speed of a spindle of the optical disk drive changes;  
and

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- [c14] 14.The method of claim 12 further comprising frequency dividing a frequency of the DPLL signal.
- [c15] 15.The method of claim 12 further comprising setting charge pump currents of a frequency detector and a phase detector according to the target frequency.
- [c16] 16.The method of claim 12 wherein calculating the target frequency references a track number and a media type of the optical disk drive.
- [c17] 17.The method of claim 12 further comprising setting an RF equalizer signal and a differential phase detector (DPD) equalizer signal according to the target frequency.
- [c18] 18.The method of claim 17 further comprising referencing tabulated data to correspond the target frequency with the second control signal, the RF equalizer signal, and the DPD equalizer signal.

- [c15] 15.The method of claim 12 further comprising setting charge pump currents of a frequency detector and a phase detector according to the target frequency.

- [c16] 16.The method of claim 12 wherein calculating the target frequency references a track number and a media type of the optical disk drive.

- [c17] 17.The method of claim 12 further comprising setting an RF equalizer signal and a differential phase detector (DPD) equalizer signal according to the target frequency.

- [c18] 18. The method of claim 17 further comprising referencing tabulated data to correspond the target frequency with the second control signal, the RF equalizer signal, and the DPD equalizer signal.